

IN THE CLAIMS:

The status of each claim that has been introduced in the above-referenced application is identified in the ensuing listing of the claims. This listing of the claims replaces all previously submitted claims listings.

1. (Previously Presented) A method for fabricating an apparatus for conditioning a polishing pad, comprising:
selecting an abrasive material that is degradable or dissolvable by at least one chemical that does not substantially degrade or dissolve a material of a polishing pad to be conditioned with the apparatus;
providing a quantity of the abrasive material comprising abrasive particles;
completely embedding at least some of the abrasive particles within a supporting substrate; and
forming a conditioning surface on the supporting substrate that includes at least a portion of the quantity of abrasive material, the conditioning surface including a plurality of abrasive elements and configured to condition a polishing pad for use in semiconductor device fabrication processes.
2. (Canceled)
3. (Previously Presented) The method of claim 1, wherein providing the support substrate comprises providing at least one of a polymer, a metal, a ceramic, paper, a paper-like material, or a fabric.
4. (Canceled)
5. (Previously Presented) The method of claim 1, wherein providing abrasive particles comprises providing abrasive particles having a dimension of about 25 μm to about 500 μm .

6. (Previously Presented) The method of claim 1, wherein providing abrasive particles comprises at least partially impregnating the supporting substrate with the abrasive particles.

7. (Original) The method of claim 6, wherein at least partially impregnating comprises disposing at least some of the abrasive particles adjacent the conditioning surface.

8. (Canceled)

9. (Previously Presented) The method of claim 1, wherein forming the conditioning surface comprises securing at least some of the abrasive particles to a surface of the supporting substrate.

10. (Original) The method of claim 1, further comprising:
forming a supporting substrate from the quantity of abrasive material.

11. (Original) The method of claim 1, wherein providing the quantity of abrasive material comprises forming a layer of the abrasive material on a supporting substrate.

12. (Original) The method of claim 1, wherein forming the conditioning surface comprises patterning the abrasive material.

13. (Original) The method of claim 12, wherein patterning the abrasive material comprises:
forming a mask including apertures therethrough over the abrasive material; and
contacting regions of the abrasive material exposed through the mask to an etchant to at least partially remove the regions through the mask.

14. (Original) The method of claim 1, wherein providing the quantity of the abrasive material comprises providing a quantity of at least one of silicon dioxide, iron, an iron alloy, copper, nickel, and tungsten.

15. (Original) The method of claim 1, wherein forming the conditioning surface comprises securing filaments comprising the abrasive material to a supporting substrate.

16. (Original) The method of claim 15, wherein securing filaments comprises securing substantially linear filaments to the supporting substrate.

17. (Previously Presented) The method of claim 16, wherein securing substantially linear filaments comprises securing the substantially linear filaments in substantially parallel relation to one another.

18. (Original) The method of claim 15, wherein securing filaments comprises securing at least one curled or twisted filament to the supporting substrate.

19. (Original) The method of claim 15, wherein securing filaments comprises forming a brush.

20. (Original) The method of claim 19, wherein securing filaments comprises securing filaments comprising a ductile material to the supporting substrate.

21. (Original) The method of claim 19, wherein securing filaments comprises securing filaments comprising at least one of iron, an iron alloy, copper, nickel, and tungsten to the supporting substrate.

22. (Original) The method of claim 15, wherein securing filaments comprises securing filaments comprising a ductile material to the supporting substrate.

23. (Original) The method of claim 15, wherein securing filaments comprises securing filaments comprising at least one of iron, an iron alloy, copper, nickel, and tungsten to the supporting substrate.

24-39 (Canceled)

40. (Previously Presented) A method for fabricating an apparatus for conditioning a polishing pad, comprising:
selecting an abrasive material that is degradable or dissolvable by at least one chemical that does not substantially degrade or dissolve a material of a polishing pad to be conditioned with the apparatus;
providing a quantity of the abrasive material; and
forming a conditioning surface that includes at least a portion of the quantity of abrasive material, the conditioning surface including a plurality of abrasive elements and configured to condition a polishing pad for use in semiconductor device fabrication processes; and
patterning the abrasive material, including:
forming a mask including apertures therethrough over the abrasive material; and
contacting regions of the abrasive material exposed through the mask to an etchant to at least partially remove the regions through the mask.

41. (Previously Presented) The method of claim 40, further comprising:
providing a supporting substrate.

42. (Previously Presented) The method of claim 41, wherein providing the supporting substrate comprises providing at least one of a polymer, a metal, a ceramic, paper, a paper-like material, or a fabric.

43. (Previously Presented) The method of claim 41, wherein providing the quantity of the abrasive material comprises providing abrasive particles.

44. (Previously Presented) The method of claim 43, wherein providing abrasive particles comprises providing abrasive particles having a dimension of about 25 μm to about 500 μm .

45. (Previously Presented) The method of claim 43, wherein providing abrasive particles comprises at least partially impregnating the supporting substrate with the abrasive particles.

46. (Previously Presented) The method of claim 45, wherein at least partially impregnating comprises disposing at least some of the abrasive particles adjacent the conditioning surface.

47. (Previously Presented) The method of claim 46, wherein forming the conditioning surface comprises securing at least some of the abrasive particles to a surface of the supporting substrate.

48. (Previously Presented) The method of claim 41, wherein providing the quantity of abrasive material comprises forming a layer of the abrasive material on the support substrate.

49. (Previously Presented) The method of claim 40, wherein providing the quantity of the abrasive material comprises providing a quantity of at least one of silicon dioxide, iron, an iron alloy, copper, nickel, and tungsten.

50. (Previously Presented) The method of claim 40, further comprising: securing filaments comprising the abrasive material to the supporting substrate.

51. (Previously Presented) The method of claim 50, wherein securing filaments comprises securing substantially linear filaments to the supporting substrate.

52. (Previously Presented) The method of claim 51, wherein securing substantially linear filaments comprises securing the substantially linear filaments in substantially parallel relation to one another.

53. (Previously Presented) The method of claim 50, wherein securing filaments comprises securing at least one curled or twisted filament to the supporting substrate.

54. (Previously Presented) The method of claim 50, wherein securing filaments comprises forming a brush.

55. (Previously Presented) The method of claim 54, wherein securing filaments comprises securing filaments comprising a ductile material to the supporting substrate.

56. (Previously Presented) The method of claim 54, wherein securing filaments comprises securing filaments comprising at least one of iron, an iron alloy, copper, nickel, and tungsten to the supporting substrate.

57. (Previously Presented) The method of claim 50, wherein securing filaments comprises securing filaments comprising a ductile material to the supporting substrate.

58. (Previously Presented) The method of claim 50, wherein securing filaments comprises securing filaments comprising at least one of iron, an iron alloy, copper, nickel, and tungsten to the supporting substrate.

59. (New) A method for fabricating an apparatus for conditioning a polishing pad, comprising:

providing a quantity of an abrasive material that is degradable or dissolvable by at least one chemical that does not substantially degrade or dissolve a material of a polishing pad to be conditioned with the apparatus;
forming a supporting substrate from the quantity of abrasive material; and
forming a conditioning surface on the supporting substrate, the conditioning surface including at least a portion of the quantity of abrasive material and a plurality of abrasive elements and configured to condition a polishing pad for use in semiconductor device fabrication processes.

60. (New) The method of claim 59, wherein providing the quantity of the abrasive material comprised providing abrasive particles.

61. (New) The method of claim 60, wherein providing abrasive particles comprises providing abrasive particles having a dimension of about 25 μm to about 500 μm .

62. (New) The method of claim 59, wherein providing the quantity of abrasive material further includes forming a layer of the abrasive material on the supporting substrate.

63. (New) The method of claim 59, wherein forming the support substrate includes patterning the conditioning surface.

64. (New) The method of claim 63, wherein patterning the supporting substrate comprises:
forming a mask including apertures therethrough over the conditioning surface; and
contacting regions of the conditioning surface exposed through the mask to an etchant to at least partially remove the regions through the mask.

65. (New) The method of claim 64, wherein providing the quantity of the abrasive material comprises providing a quantity of at least one of silicon dioxide, iron, an iron alloy, copper, nickel, and tungsten.

66. (New) The method of claim 59, further comprising:
securing filaments comprising the abrasive material to the supporting substrate.

67. (New) The method of claim 66, wherein securing filaments comprises securing substantially linear filaments to the supporting substrate.

68. (New) The method of claim 67, wherein securing substantially linear filaments comprises securing the substantially linear filaments in substantially parallel relation to one another.

69. (New) The method of claim 66, wherein securing filaments comprises securing at least one curled or twisted filament to the supporting substrate.

70. (New) The method of claim 66, wherein securing filaments comprises forming a brush.

71. (New) The method of claim 70, wherein securing filaments comprises securing filaments comprising a ductile material to the supporting substrate.

72. (New) The method of claim 70, wherein securing filaments comprises securing filaments comprising at least one of iron, an iron alloy, copper, nickel, and tungsten to the supporting substrate.

73. (New) The method of claim 66, wherein securing filaments comprises securing filaments comprising a ductile material to the supporting substrate.

74. (New) The method of claim 66, wherein securing filaments comprises securing filaments comprising at least one of iron, an iron alloy, copper, nickel, and tungsten to the supporting substrate.